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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,850	03/02/2005	Colin Christopher Giles	J3685(C)	9359
201 7590 01/14/2008 UNILEVER INTELLECTUAL PROPERTY GROUP 700 SYLVAN AVENUE, BLDG C2 SOUTH ENGLEWOOD CLIFFS, NJ 07632-3100				
			EXAMINER HOFFER, SUSANNA MARIE	
			ART UNIT 1615	PAPER NUMBER
			MAIL DATE 01/14/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,850	<b>Applicant(s)</b> GILES ET AL.	
	<b>Examiner</b> Susanna Hoffer	<b>Art Unit</b> 1615	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Acknowledgement is made for the amendments and arguments filed October 29, 2007. The rejection of claim 17 under 35 U.S.C. §112 and §101 is withdrawn in view of the cancellation of the claim. The rejection of claims 12 and 13 under 35 U.S.C. §101 is withdrawn and a new rejection is made in view of the applicant's amendments. New claims 18 and 19, which have support in the specification at page 25, lines 18-23, are also rejected.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9, 11, and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakama, et al (EP 500 941 A1).

The claims recite a composition comprising an aqueous dispersion of water insoluble composite particles comprising: i.) clay with a net surface charge, ii) a charged organic molecule comprising at least 6 carbon atoms, and iii) a water insoluble hair benefit agent which is immiscible with the charged organic molecule which can be a silicone polymer, wherein the composition further comprising suitable hair treatment ingredients in an aqueous carrier and the weight of the particles is from 0.05 to 10% by weight of the total composition (claim 1). The weight ratio of the organic molecule to the clay is from 0.05:1 to 20:1 and the ratio of clay to the water insoluble hair benefit agent is .05:1 to 1:1 (claims 2 and 8). The diameter of the composite particles is from 5 to 450 microns (claim 3). The clay has a net negative surface charge and the organic molecule has a positive charge (claim 4). The clay is a synthetic hectorite (claim 5) and the charged organic molecule is a cation of an alkyl trimethyl ammonium chloride, wherein the alkyl chain comprises 12 to 22 carbon atoms and is a cationic polymer (claims 6 and 7). The insoluble hair benefit agent is a silicone polymer (claim 9). The composition is a rinse off hair conditioner (claim 11). The claims recite a method for making the composition by preparing an aqueous dispersion of the composite particles and combining with suitable hair treatment ingredients in a compatible aqueous carrier without first drying the particles (claim 14). The claims also recite a method for treating

hair and/or scalp and for depositing hair benefit agents by applying the composition to the hair and/or scalp and rinsing with water (claims 15 and 16).

Nakama, et al teach a composition comprising a clay mineral such as hectorite treated with a quaternary ammonium type cationic surface-active agent (p. 6, lines 12-18). Hectorite is inherently negatively charged on its surface. Stearyl trimethyl ammonium chloride, an alkyltrimethyl ammonium chloride that comprises an alkyl chain of 18 carbon atoms, is taught as a cationic surfactant (p.3, lines 19-20). Nakama, et al teach that the composition can comprise silicone oil, which is a water insoluble polymer and a common hair benefit agent in the cosmetic art (p. 7, lines 50-52). The modified clay minerals can be in an aqueous phase (p. 6, line 23) and the silicone oil can be in an oil-in-water type emulsion (p. 7, line 52). The composition can be used in a hair rinse (p.7, line 58). A hair rinse is a conditioning composition meant to be rinsed out of one's hair after application, addressing claims 11 and 14-16.

Nakama, et al do not teach the weight percentage of the composite particles or the weight ratios of above components i, ii, and iii to each other. Nakama, et al also do not teach the diameter of the composite particles.

However, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to determine the weight percentages and particle sizes at which the composite particles are most effective. The result-effective adjustment in conventional working parameters (e.g., determining the appropriate weight percentages, particle sizes, weight ratios, etc. within the composition) is deemed merely a matter of

judicious selection and routine optimization, which is well within the purview of the ordinary artisan.

Claims 1, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakama, et al (EP 500 941 A1) as applied to claim 9 above, and further in view of Lan, et al (US 6,399,690).

The claim recites the composition as claimed in claim 9, wherein the water insoluble hair benefit agent is a silicone elastomer.

Nakama is discussed above.

Although Nakama et al teach the use of silicone oil, addressing claim 9, they do not specifically mention a silicone elastomer.

Lan, et al teach composite particles (nanocomposites) comprising phyllosilicates, onium ions, and a matrix polymer (col. 7, lines 35-57) for use in hair care (col. 8, line 51). The matrix polymer can be made of silicone elastomer (col. 18, lines 6-7).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to add silicone elastomer to a hair treatment composition such as that in Nakama because silicone elastomers are well known in the hair treatment art as in Lan et al which teach that silicone elastomers can be included in composite particles comprising phyllosilicates and onium ions. Hectorite is a phyllosilicate and quaternary ammonium ions are onium ions. Thus, since the silicone elastomers of Lan are known

for the same purpose as Nakama, namely to be used in hair treatments, then it is obvious to use them in the same composition.

### ***Response to Arguments***

Applicant's arguments filed October 29, 2007 have been fully considered but they are not persuasive.

Applicant argues that Nakama et al. does not disclose or suggest the production of composite particles and that the reference introduces its clay component as part of the ingredients that form the aqueous phase of the emulsions therein described. This is not persuasive because Nakama et al. discloses a composite (see abstract) and the clay is suspended as a solid dispersed in either phase (page 6, lines 19-26).

Applicant also argues that Lan et al. discloses an embodiment directed to combining the clay with a polar compound or solvent to provide a carrier composition for an active compound and a second embodiment directed to a composite formed through melt compounding the clay and plastic components. Applicant argues that these melt compounded plastic nanocomposite compositions are not the composite compositions described by the instant claims. This argument is not persuasive because the claims are directed to a product, not a process of making, and the second embodiment teaches the composite particles as described by the instant claims.

***New Rejections in Response to Amended Claims***

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakama et al (EP 500 941 A1).

Claims 12 and 13 are product-by-process claims directed to a hair treatment composition according to claim 1. "If the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." See MPEP 2113.

The hair treatment composition according to claim 1 is rejected over Nakama earlier in this office action.

Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakama et al. (EP 500 941 A1) in view of Nersesian et al. (US 3, 876,760).

The claims are directed to a hair treatment composition as described in claim 1 wherein the hair benefit agent comprises a finely divided solid such as zinc pyrithione.

Nakama et al., discussed above, does not teach the use of a finely divided solid such as zinc pyrithione.



Nersesian et al. teach that zinc pyrithione can be used as an antidandruff agent (col. 9, lines 7-9).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Nersesian et al. with the hair benefit delivery agent taught by Nakama et al. One would have been motivated to do this because Nersesian et al. teach that zinc pyrithione is used as a hair benefit agent, specifically as an antidandruff agent. One would have been motivated to use zinc pyrithione in a finely divided form so that the particles could form a composite with the delivery vehicle taught by Nakama et al.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susanna Hoffer whose telephone number is (571)272-9345. The examiner can normally be reached on Monday - Friday, 9:00 a.m.-5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward can be reached on (571)272-8373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SMH

  
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